

Habitat Management Plan Addendum No. 4

Proposed Riverfront Park Improvements
Spokane, Washington

for

City of Spokane Parks and Recreation

May 6, 2019



GEOENGINEERS 
Earth Science + Technology

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Proposed Riverfront Park Improvements

Spokane, Washington

File No. 0110-148-15

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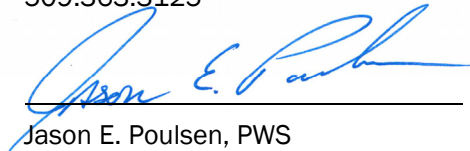
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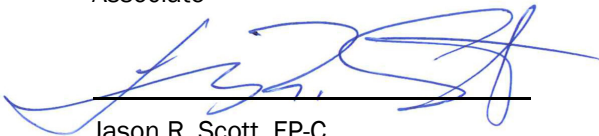
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LIST OF ACRONYMS

BMP	best management practices
CESCL	Certified Erosion and Sediment Control Lead
ESC	Erosion and Sediment Control
ft ²	square feet
HMP	Habitat Management Plan
OHWM	ordinary high-water mark
RHA	Riparian Habitat Areas
SMA	Shoreline Management Areas
SMC	Spokane Municipal Code
SPCC	Spill Prevention, Control and Countermeasure
SRSM	Spokane Regional Stormwater Manual
SWPPP	Stormwater Pollution Prevention Plan
T&E	threatened and endangered
WDFW	Washington Department of Fish and Wildlife

INTRODUCTION

GeoEngineers, Inc. (GeoEngineers) completed a Habitat Management Plan (HMP) on June 17, 2015 for the City of Spokane Parks and Recreation (City) for the proposed Riverfront Park (Park) Redevelopment project. That HMP was completed based on the 2014 Conceptual Master Plan, prior to the development of specific site design plans. The June 17, 2015 HMP was developed to provide a background context, describe the general existing habitat conditions, and list the potential presence of priority species and habitat. However, because specific design plans had not been developed at the time of the initial HMP report, specific habitat impacts could not be determined. Throughout the development of the initial HMP, GeoEngineers, the City, Washington Department of Fish and Wildlife (WDFW) and Washington State Department of Ecology (Ecology) understood that unavoidable habitat impacts could potentially occur and addendums to the HMP were expected as specific designs were developed for the overall park project.

Each addendum to the June 17, 2015 HMP describes specific redevelopment activities proposed at that location along with potential impacts and benefits related to priority species and habitat within a specific park area. Following the completion of the full Riverfront Park Redevelopment project, the cumulative effects to species and habitat, identified from each addendum, will be compiled in a single recommended mitigation plan document. The mitigation plan will summarize the potential impacts and benefits related to each park feature and provide a recommendation on what, if any, mitigation activities are required to offset the entirety of the Riverfront Park Redevelopment. Recommendations will be based on both qualitative and quantitative changes over existing conditions and will require consensus between WDFW, Ecology and the City.

Project Location

Riverfront Park is located in downtown Spokane, Washington and is roughly bordered by West Cataldo Avenue on the north; West Spokane Falls Boulevard on the south; North Division Street on the east; and Post Street on the west. The park is owned and managed by the City who is also the lead regulatory review authority for this project. It encompasses approximately 100 acres and includes Havermale Island, Snx Mene Island (formerly Canada Island), and portions of the north and south banks of both channels of the Spokane River.

This addendum addresses proposed alterations associated with the Riverfront Park North Bank project (Figure 1, Vicinity Map). Reference to the “project” or “project site,” within this addendum, will pertain only to the smaller parcels related to the Riverfront Park North Bank project and not the entire 100-acre park, unless specifically described herein.

Regulatory Background

Spokane Municipal Code (SMC) 17E.020.090 requires the preparation of an HMP for proposed uses or activities that are: (1) located within fish and wildlife habitat conservation areas; or (2) that would impact priority species or habitat (including Shoreline Management Areas [SMA] and Riparian Habitat Areas [RHA]). The City is further required to use the HMP to evaluate use or activity impacts for determining mitigation measures (if needed) and/or developing management plan recommendations (SMC 17E.020.050).

Shoreline jurisdiction across the Park (larger 100-acre park) is established at 200 feet from the ordinary high-water mark (OHWM); however, the Park is located in an area also classified as a “Downtown” district with an “Urban Intensive Environment” designation. Under this designation and with appropriate justification, the City allows uses or activities to occur within 50 feet of the OHWM with an additional 25-foot

building setback. The City, in consultation with WDFW, has also established a RHA buffer that includes the outer edge of the 100-year floodplain or 130 feet from the OHWM (whichever is greater). Similar to the 50-foot buffer, the City allows uses or activities to occur within the 130-foot buffer (with appropriate justification). The majority of existing building structures, located on site, fall within one or more of these shoreline jurisdictions, buffers or setbacks.

Results from the 2015 Habitat Management Plan

Site observations from the June 17, 2015 HMP (GeoEngineers 2015) verified the larger 100-acre park is located in a heavily used urban setting with minimal riparian habitat. Although marginal riparian habitat is found within Park boundaries, it is located on steep, rocky terrain with sparse native vegetation and provides little to no ecological function relative to assumed natural habitat conditions.

Results from the June 17, 2015 HMP indicate no threatened and/or endangered (T&E) plant, wildlife or aquatic species are mapped within a 1-mile radius of the 100-acre park. Additionally, the Park does not contain critical habitat for T&E species (GeoEngineers 2015). State priority species that have the potential to be present within the 100-acre park boundaries, and to some degree the smaller project site, likely include rainbow trout, Peregrine falcons and Townsend's big-eared bats (GeoEngineers 2015). However, the report concludes that redevelopment activities, proposed for the 100-acres park, are not likely to impact existing habitat or populations of these species within the general area.

Addendum No. 4 Scope

The primary focus of Addendum No. 4 is to evaluate potential impacts on priority species and/or habitat within the specific project boundary designs for the proposed alterations for the Riverfront Park – North Bank project. Background information for the overall park area is contained in the 2015 GeoEngineers HMP. Therefore, it is not necessary to reproduce it under this addendum. This addendum will only quantify and map existing habitat conditions, within the site-specific footprint of the proposed park improvement designs and discuss potential impacts from the proposed Riverfront North Bank redevelopment. No habitat or impervious surface calculations were quantified for the remainder of the park.

Specific mitigation concepts are not developed within this addendum. The mitigation for all impacted park elements will occur after park improvements are completed in 2020. Mitigation needs, specific to the proposed park improvements, identified in this addendum, will be addressed in a separate HMP mitigation plan at a later date, as necessary and appropriate.

METHODS

Review of Design Plans

GeoEngineers reviewed design plans provided by the City for the proposed actions covered in this addendum report. Potential impacts to habitat were quantified based on these plans. GeoEngineers assumed the level of detail provided in the design plans is sufficient to quantify potential foreseeable impacts.

Field Reconnaissance

A field reconnaissance was completed by a GeoEngineers biologist on December 6, 2018 to verify maps created in the 2015 HMP and to photograph existing conditions and habitat types within the footprint of,

and generally adjacent to, each proposed action. Site photographs are presented in Appendix A, Site Photographs.

RIVERFRONT PARK NORTH BANK

Proposed Action

The proposed Riverfront Park North Bank redevelopment incorporates several improvements along the north bank of the Spokane River between North Howard Street and North Washington Street. Figure 2, Riverfront Park North Bank Existing Site Layout, depicts the current features within the area. The site incorporates two tax parcels, encompassing 6.94 acres owned by the City. In addition, 15 City-owned parcels north of Riverfront Park, including a section of West Cataldo Avenue, will be redeveloped with a new Sportsplex complex. Clean stormwater generated from the City-owned parcels north of West Cataldo Avenue will be directed to the site. Redevelopment of the site will be a playscape with recreation amenities, featuring the “Ice Age Floods” as the main historical component. Specifics of the primary project elements are discussed below (Figure 3, Riverfront Park North Bank Proposed Site Layout):

- Demolition of the 21,332 square feet (ft²) maintenance building at 809 North Washington Street and construction of a new 8,000 ft² maintenance building and 8,000 ft² operations yard in the northeastern section of the site.
- Reconstruction of the existing paved parking lot within the southeast portions of the site, and an elimination of the parking lot to the north.
- Removal of the existing restroom and preservation of the Pavilion and shelter buildings.
- Construction of a new Sportsplex on the 15 parcels north of Riverfront Park. Stormwater generated from the Sportsplex will be directed toward the site through a grass-lined channel, which will provide a dual role of both a landscape feature and stormwater conveyance.
- Stormwater at the site will be managed as follows:
 - Clean stormwater generated from the Sportsplex roof will be managed based on the *Spokane County Regional Stormwater Manual* (SRSM). It may connect to the Washington MS4 outlet at manhole 1100230ST or downstream in the Spokane River. A flow path for the 100-year storm would be developed to direct flow to the river to limit damage and maximize safety.
 - The parking lot on the southeast corner of the site will be managed with bioretention (treatment and infiltration on site). As an alternative, the bioretention may have an underdrain to connect the Washington MS4 outfall pipe.
 - Stormwater generated from the new maintenance building roof runoff will be managed within the park.
- Construction of a grass-lined channel through the site will provide a dual role of both a landscape feature and conveyance of stormwater from the proposed Sportsplex development. Specifics on the design of the final channel have not been determined but it is anticipated that it may be developed as a grassy swale depression.
- Development of a vertical playground structure within the central portion of the site.

- Construction of a skate bowl feature within the central-eastern portion of the site, west of the proposed new maintenance building.
- Future construction of a basketball court within the south-central portion of the site.
- Miscellaneous climbing features, water tables, pedestrian corridors/walkway extensions, historical “Ice Age Flood” features, Mima mounds, bridges, parking areas, basketball court, building renovation, raingarden, and access improvements.
- Additional site improvement may include installation of new underground utilities, site grading, and construction of new landscaping and hardscape.

Change from Existing Conditions

Disturbance Area

The disturbance area of the proposed North Bank project area is 6.94 acres across two tax parcels. The western portion of the project area will be redeveloped with Mima Mounds, water and climbing amenities, pedestrian corridors, and historical “Ice Age Flood” features. In addition, the existing Pavilion and shelter will be renovated. The eastern section of the site will include the demolition of the existing maintenance/storage building and construction of a new parking area. The new maintenance building and yard will be situated on the northeast section of the site. Basketball and skate bowl features will also be completed on the north-central and south-central portion of the site. Parcels north of West Cataldo Avenue will be redeveloped with a Sportsplex, which will generate clean stormwater directed to the site.

Vegetation and Habitat

Approximately 23 trees will be removed from the disturbance area and 45 trees will be protected and retained. In addition, 88 new trees and over 450 new shrubs will be planted. Drought-tolerant grasses will be interspersed with the shrubs.

There will be a net gain in vegetated area between the existing and proposed conditions. Existing vegetated areas comprise approximately 26 percent of the disturbance area while hardscape comprises the remaining 74 percent. Currently, basketball court will affect the total net gain in vegetated area at the site. The basketball court is proposed to encompass 10,434 ft².

Following construction, vegetated and hardscape areas will encompass approximately 34 percent and 66 percent, respectively, resulting in an approximate 8 percent increase in vegetated areas.

Vegetation composition will also change between the existing and proposed conditions. The present landscape includes deciduous and coniferous trees, manicured lawn, and vegetated planters. The project will include removal of young to mid-successional trees (primarily ash species). This will be offset by planting a combination of Rocky Mountain maple, (*Acer glabrum*), serviceberry (*Amerlanchier alnifolia*), and Kousa dogwood (*Cornus kousa*), ginko (*Ginko biloba*), Ponderosa pine (*Pinus ponderosa*), London plane tree (*Platanus acerifolia*), lilac (*Syringa pekinensis*), and silver linden (*Tilia tomentosa*). Vegetation below the OHWM will not be disturbed as part of these improvements.

The proposed vegetation comprises native species and greater plant diversity over the existing conditions. Table 1 provides a list and quantity of groundcover, tree and shrub species that will be incorporated into the North Bank design.

TABLE 1. NORTH BANK PLAYGROUND PROPOSED PLANT SCHEDULE

Location	Common Name	Quantity
Trees	Rocky Mountain maple	1
	London plane tree	6
	Serviceberry	1
	Kousa dogwood	7
	Ginko	15
	Ponderosa pine	3
	Manchurian Ash	31
	Lilac	14
	Silver linden	8
Shrubs	Summer love hyssop	35
	Summersweet clethra	69
	Red twig dogwood	11
	Kelseyi dogwood	60
	Purple coneflower	70
	Stella de Oro daylily	20
	Spike gayfeather	94
	Creeping mahonia	41
	Diablo purple ninebark	35
	Tiny wine ninebark	31
	Pink beauty potentilla	62
	Little princess Japanese spirea	87
	Burning bush	1
	Ocean-spray	4
	White evergreen candytuft	1
	Gloriosa daisy	29
	Sunrose	1
	Occidental blue rush	66
Grasses	Indian rice grass	88
	Blue oat grass	232
	Great Basin wildrye	70
	Graziella Maiden grass	202
	Hamlen dwarf fountain grass	504
	Blue Indian grass	6
	Switch grass	46
	Feather reed grass	1

The existing landscape and most of the proposed landscape do not represent the assumed natural habitat conditions. The project area is typical of urban park settings, which supports species common to anthropogenically disturbed environments (e.g., songbirds, waterfowl, squirrels and other rodents). However, proposed renovation will incorporate drought-tolerant grass species endemic to the region. Thus, the proposed vegetation schedule has greater species composition typical of the Spokane area. Nonetheless, overall habitat quality may be limited by the surrounding noise, light and presence of people, which are typical of urban park settings.

Site Drainage

Impervious surfaces within the disturbance area will decrease compared to existing conditions. The final layout will result in a 10,435 ft² basketball court. Following construction, about 66 percent of the site covered with impervious surfaces, including buildings and pavement.

Clean stormwater from the new Sportsplex roof will be managed based on the SRSRM. It may connect to the Washington MS4 outlet at manhole 1100230ST, or downstream in the Spokane River. A flow path for the 100-year storm would be developed to direct flow to the river to limit damage and maximize safety.

Stormwater from the parking lot on the southeast corner of the site will be managed with bioretention (treatment and infiltration on site). As an alternative, the bioretention may have an underdrain to connect the Washington MS4 Outfall pipe. The park maintenance building roof runoff will be managed within the park.

Shoreline Setbacks

Shoreline jurisdiction, within the site, falls under the City of Spokane Downtown District Urban Intensive Environment designation. The 50-foot shoreline buffer is identified in Figure 3. No construction is planned within the buffer, although placement of temporary erosion control measures will occur within the 50-foot buffer and 25-foot building setback (total of 75 feet from OHWM). The total area of impervious surfaces within the 50-foot buffer will remain consistent with existing conditions.

Operation, Noise, Light and Aesthetics

Public use of this area is anticipated to increase after project completion as people are drawn to the updated facilities. Noise and light levels are not anticipated to increase over existing conditions. Light and noise levels generated during operation of these facilities will be typical of a downtown city park environment and are not expected to have a substantial impact to species and/or their habitats. The development will incorporate landscaping that will contribute to the Park's overall aesthetic appeal as identified in the original Master Plan (City of Spokane 2014).

Habitat Management

The objective of this HMP addendum is to identify potential impacts to existing habitat conditions. The June 17, 2015 HMP developed the following specific objectives:

- Provide no-net loss of species and habitat within the park
- Develop design details in redevelopment areas that ensure operational activities do not negatively impact onsite species or critical areas

- Provide enhancement opportunities where possible to increase buffer functions
- Provide mitigation, as needed, for unavoidable impacts to the Spokane River habitat and/or buffers/setbacks

No Net Loss and Protecting Existing Species

As described in GeoEngineers' initial HMP (GeoEngineers 2015), there are no mapped terrestrial critical habitats and no plant and/or animal species likely to utilize terrestrial critical habitat within the proposed disturbance area. Vegetation primarily consists of Ponderosa pine, Douglas fir (*Pseudotsuga menziesii*), sycamore (*Platanus sp.*), maple trees, ornamental shrubs and manicured lawn, which will not change substantially between existing and proposed conditions. However, additional drought-tolerant native grasses will be planted throughout the project area. Potential wildlife utilizing these habitats include synanthropic species, those adapted to live near or associate with human environments, as well as waterfowl, squirrels and songbirds. Temporary impacts to these species may occur during construction, however; these impacts are anticipated to be relatively brief and self-mitigating following redevelopment.

The June 17, 2015 HMP identified rainbow trout, Peregrine falcons and Townsend's big-eared bats as potential species that may occur in the area. Consultation with WDFW during previous site visits concluded these species may be temporarily deterred from accessing the area during construction, however; no net loss of habitat or species is anticipated from redevelopment activities discussed in this addendum.

Operational Activities

Noise levels will temporarily increase during construction activities. With the exception of additional daytime noise associated with the play area, these levels are expected to return to current Park operation levels following redevelopment. A temporary increase in construction noise is expected due to heavy equipment and potential increase of traffic volume by contractors. Conservation measures should be incorporated to reduce noise impacts to adjacent neighbors and wildlife. Typical noise conservation measures may include minimizing and consolidating heavy equipment use as much as possible and/or using equipment within approved work hours typically between 7:00 AM to 6:00 PM. Following construction, temporary noise level increases may occur within the new play area. However, these redevelopment activities associated with human use are not expected to impact the Spokane River or associated buffer habitats.

No disturbance is anticipated to waterways or aquatic habitats at the project areas covered under this addendum. Appropriate erosion controls and best management practices (BMPs) will be implemented to reduce runoff and turbidity around construction areas. The new constructed stream channel may incorporate a grassy swale design but will not support fish habitat.

An Erosion Sediment Control (ESC) Plan and a Spill Prevention, Control and Counter Measure (SPCC) Plan will be required for construction activities occurring adjacent to waterways and should be designed and monitored by a Certified Erosion and Sediment Control Lead (CESCL). Due to these erosion control efforts, turbidity resulting from construction activities is not anticipated to result in substantial negative impacts to water quality and/or aquatic environments.

There is potential for accidental releases from contaminants such as fuel or hydraulic fluids from onsite construction, maintenance, or refueling activities. BMPs should be implemented as part of the Park's temporary construction and regular maintenance and operation activities and included as part of the

contractor's Stormwater Pollution Prevention Plan (SWPPP). If appropriate, BMPs are installed and are properly maintained, risk impacts can be attenuated.

Enhancement Opportunities

The proposed project will provide enhancement opportunities related to establishment of native vegetation and greater species diversity. The collective hardscape will decrease between 7 and 8 percent across the project areas under this addendum, and a net reduction in hardscape is expected when the full scope of all project addenda is realized. Moreover, drought-tolerant native grass species will be incorporated into landscaping and will be planted within renovated areas of the site. A net gain of at least 65 trees will also be achieved under this addendum.

CONCLUSIONS

Anticipated Impacts

Unavoidable impacts that result from the proposed redevelopment activities discussed in this addendum are expected to include:

- Loss of approximately 23 mid-successional trees (primarily maple species along Washington Street).
- Temporary increases in noise during the construction period.
- Temporary increase in potential erosion and impermeable areas during construction.
- Temporary disturbance of landscape areas within the construction access and staging areas.

Anticipated Enhancement

Enhancement/self-mitigating actions, resulting from the proposed redevelopment activities discussed in this addendum are expected to include:

- Planting of approximately 86 trees and retaining 45 existing trees in the North Bank area.
- Increased shrub quantities and diversity, including over 650 shrubs planted at the North Bank. See table 1 above, which outlines the number and species for the project area.
- An increase of 8 percent in vegetated areas, depending on the size of the basketball court selected for the site.
- No change in vegetated area within the 50-foot shoreline buffer.

Summary

Based on design information obtained from the City, as understood/presented in this addendum, the proposed redevelopment of the North Bank is not expected to substantially impact the size, function and/or value of the existing site habitat. There is an expected net gain of 63 trees following the removal of 23 trees, protection of 45 trees and planting of 86 new trees. Moreover, drought-tolerant native grass species will be incorporated into landscaping and will be planted within renovated areas of the site. Hardscape will decrease at the site when compared to current conditions.

All construction activities are considered temporary and self-mitigating through proper BMPs. Additional mitigation for these projects is not anticipated if the projects are constructed as planned.

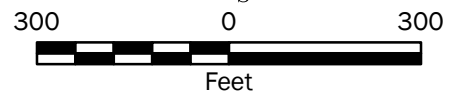
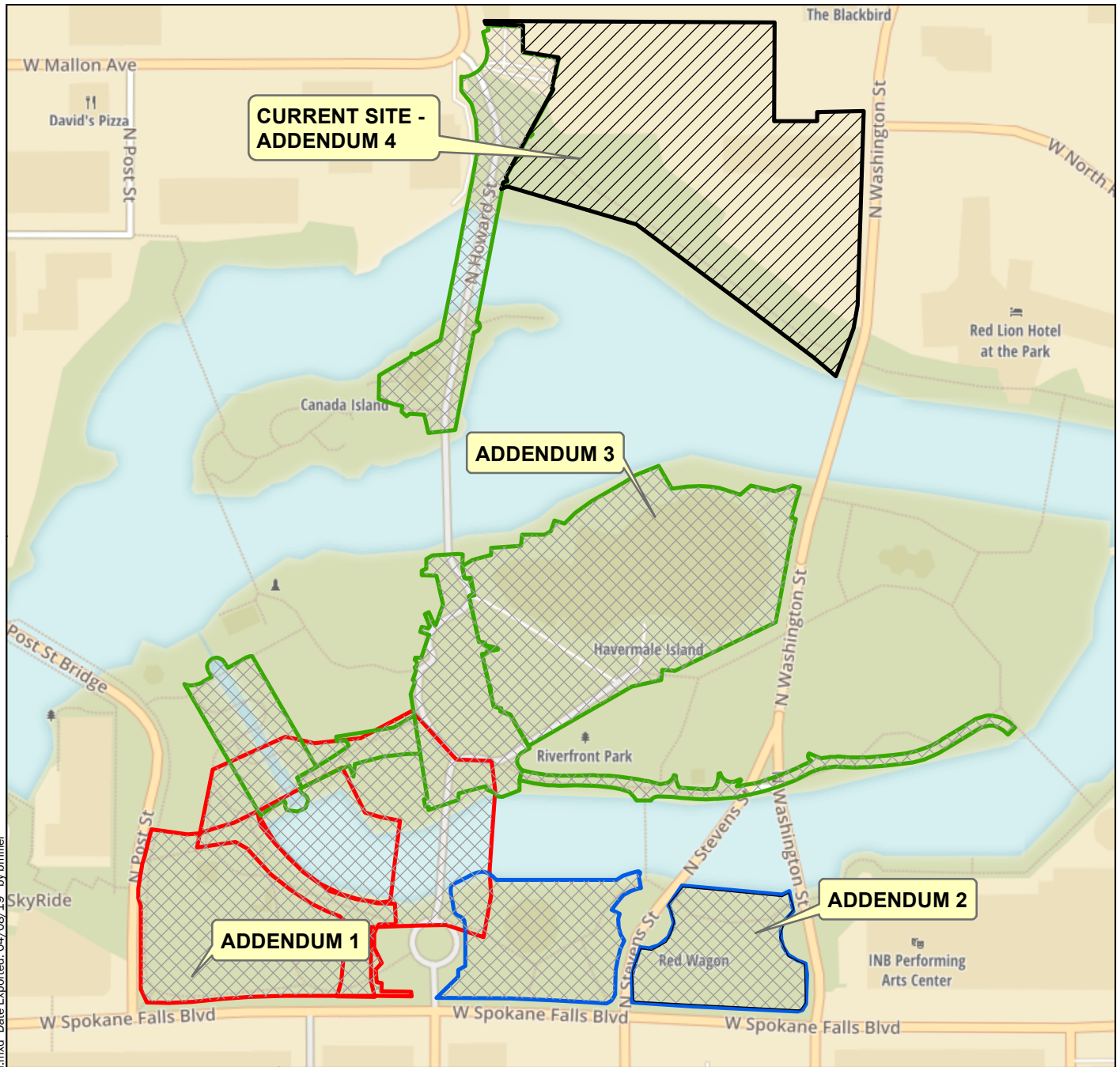
Design plans indicate an increase of 8 percent in softscape versus existing conditions across the project areas (depending on the size of the new basketball court). In addition, this gain will be augmented by the establishment of native, drought-tolerant vegetation and increased species diversity. In our opinion, the current plans associated with the North Bank development provide inclusive habitat mitigation to offset potential impacts. The planned developments also provide measures to achieve the goals of the original Master Plan (City of Spokane 2014). The final mitigation plan will quantify cumulative impacts to priority species and habitat from all Park Redevelopment activities and, if needed, will recommend additional mitigation activities.

REFERENCES

City of Spokane, Washington Department of Parks and Recreation. 2018. Riverfront Park – North Bank Playground Preferred Alternative Concept Plan West. October 31, 2018.

City of Spokane. 2014. Riverfront Park Master Plan 2014. Available at: http://riverfrontparknow.com/wp-content/uploads/2015/03/rfp_mp_draft_030315.pdf.

GeoEngineers, Inc. 2015. Habitat Management Plan. Proposed Riverfront Park Improvements. Spokane, Washington. Prepared for City of Spokane Department of Parks and Recreation. June 17, 2015.



Vicinity Map

Habitat Management Plan Addendum No. 4
Riverfront Park, Spokane, Washington



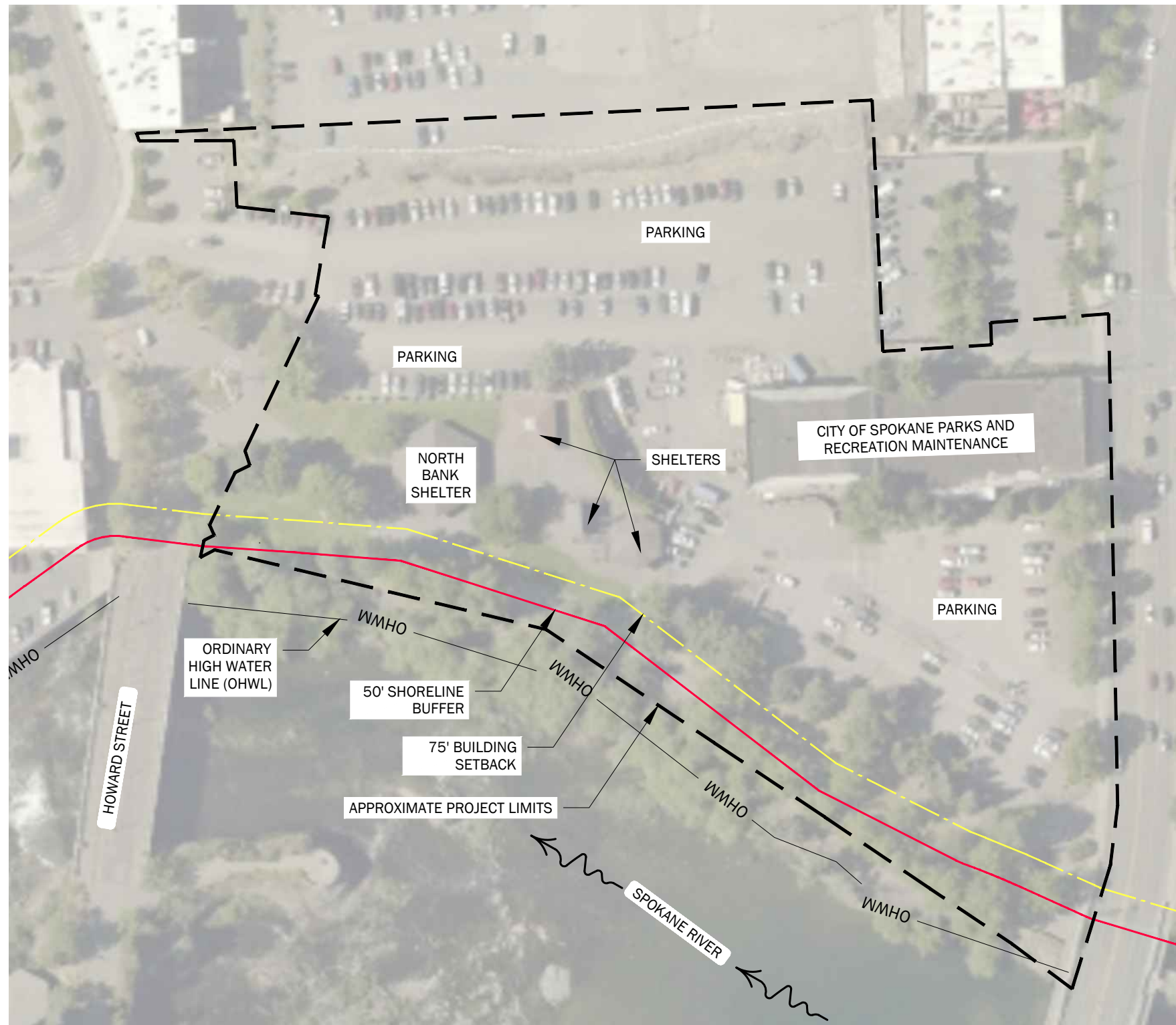
Figure 1

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2017

Projection: NAD 1983 UTM Zone 11N



Notes:

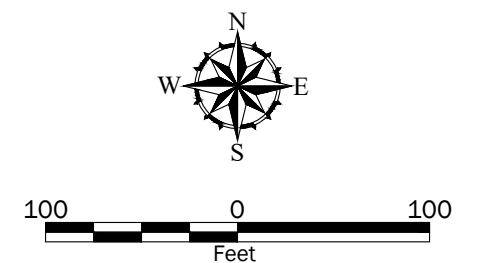
1. Figures are reproduced from figures included in the City of Spokane Riverfront Park North Playground Site, dated March 22, 2019.
2. The location of all features shown is approximate.
3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Sources:

Aerial from: ERSI, dated June 26, 2016

Plans Obtained from:

Bernardo Wills Architects PC
City of Spokane, Washington
Department of Parks & Recreation
North Bank Playground
65% Construction Drawings
Spokane, Washington
March 22, 2019



Riverfront Park North Bank
Existing Site Layout

Habitat Management Plan Addendum No. 4
Riverfront Park, Spokane Washington



Figure 2

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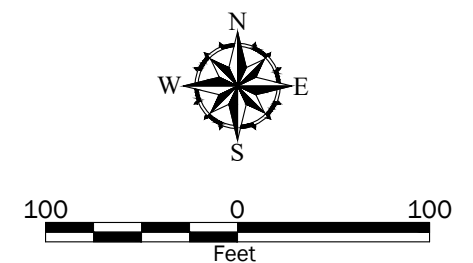
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North Bank Playground
65% Construction Drawings
Spokane, Washington
March 22, 2019



Riverfront Park North Bank Playground Proposed Site Layout

Habitat Management Plan Addendum No. 4
Riverfront Park, Spokane Washington



Figure 3

APPENDIX A

Site Photographs



Photograph 1. General view of the eastern boundary of the North Bank project area (facing west).



Photograph 2. General view of the existing parking area on the southeast portion of the North Bank project site (facing northeast).

Site Photographs

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Figure A-1



Photograph 3. General view of manicured grass and coniferous tree vegetation at the North Bank project site (facing southwest).



Photograph 4. General view along Centennial Trail. With sycamore trees and manicured grasses are the primary vegetation in this portion of the North Bank (facing east).

Site Photographs

Habitat Management Plan – Addendum No. 4
Riverfront Park Spokane, Washington



Photograph 5. Existing stormwater outfall to the north channel of the Spokane River (facing west).



Photograph 6. General view of rip rap in the riparian area of the north channel of the Spokane River (facing south).

Site Photographs

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Photograph 7. General view of riparian vegetation along the north bank of the Spokane River (facing east).



Photograph 8. Existing restroom and pavilion buildings at the North Bank (facing south). The pavilion buildings will be renovated and Mima Mounds will be installed in this area as part of the proposed upgrades.

Site Photographs

Habitat Management Plan – Addendum No. 4
Riverfront Park Spokane, Washington



Photograph 9. View of the northeast section of the North Bank site (facing northeast). The new maintenance building and skate bowl feature are planned for this area of the park.



Photograph 10. General view of the basalt cliff area on the northern section of the North Bank project site (facing north).

Site Photographs

Habitat Management Plan – Addendum No. 4
Riverfront Park Spokane, Washington